

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims 9-11, 13-19, 21-24, 26-29 and 42-47 without prejudice or disclaimer, and AMEND claim 5 in accordance with the following:

1. (PREVIOUSLY PRESENTED) A method of recording data on an optical disc, the method comprising:

dividing each of a plurality of error correction code (ECC) blocks corresponding to the data into a plurality of partitions which are formed by dividing each ECC block in row and column directions;

interleaving the data from the plurality of the partitions so that partitions from each of the ECC blocks are alternately selected such that progression through the partitions of each ECC block occurs diagonally to generate a first recording block;

modulating the first recording block; and

recording the modulated first recording block on the optical disc.

2. (ORIGINAL) The method as claimed in claim 1, further comprising rearranging the first recording block to generate a second recording block.

3. (ORIGINAL) The method as claimed in claim 2, wherein the first recording block is rearranged on a sector basis to generate the second recording block.

4. (CANCELLED)

5. (CURRENTLY AMENDED) The method as claimed in claim 1, wherein the dividing of the ECC blocks comprises:

dividing each of the ECC blocks in a column direction by a predetermined number of bytes into object blocks; and

dividing each of the object blocks in at least one of a row direction and the column direction by the predetermined number of bytes to generate the plurality of partitions such that each of the object blocks is a same number of units in both the row direction and the column direction.

6. (ORIGINAL) The method as claimed in claim 5, wherein the interleaving comprises interleaving all of the data using a same algorithm.

7. (PREVIOUSLY PRESENTED) The method as claimed in claim 1, wherein the interleaving the data comprises interleaving a predetermined number of bytes of the data from each ECC block to generate the first recording block.

8. (PREVIOUSLY PRESENTED) The method as claimed in claim 1, wherein the dividing of the ECC blocks includes:

obtaining a common divisor d for $N1$ and $N2$ wherein a size of the ECC blocks is $N1 \times N2$ bytes where $N1$ and $N2$ are positive integers;

dividing each of the ECC blocks into units of d bytes in a column direction to generate $N2/d$ object blocks; and

dividing each of the object blocks into d portions in the column direction and a row direction to generate $d \times d$ of the partitions.

Claims 9-31 (CANCELLED)

32. (PREVIOUSLY PRESENTED) A method of recording/reproducing data comprising:

- generating a plurality of error correction code (ECC) blocks, the ECC blocks comprising the data;
- dividing each of the ECC blocks into a plurality of partitions;
- interleaving the data from the partitions, comprising alternately selecting the partitions of each of the ECC blocks along diagonal paths;
- modulating the recording block; and
- recording the modulated recording block on a medium.

33. (ORIGINAL) The method as claimed in claim 32, wherein the interleaving of the data further comprises selecting an equal amount of the data from the partitions of each of the ECC blocks.

34. (ORIGINAL) The method as claimed in claim 32, further comprising encoding the data in the ECC blocks.

35. (ORIGINAL) The method as claimed in claim 32, wherein the interleaving of the data generates a recording block.

36. (ORIGINAL) The method as claimed in claim 32, wherein the dividing of the ECC blocks comprises dividing each of the ECC blocks into object blocks.

37. (ORIGINAL) The method as claimed in claim 36, wherein the dividing of the ECC blocks further comprises dividing the object blocks into the partitions.

38. (PREVIOUSLY PRESENTED) The method as claimed in claim 37, wherein a size of the ECC blocks is $N1 \times N2$ bytes where $N1$ and $N2$ are positive integers, d is a common divisor of $N1$ and $N2$, and the dividing of the ECC blocks into the object blocks comprises dividing the ECC blocks by d bytes in a first direction.

39. (ORIGINAL) The method as claimed in claim 38, wherein the dividing of the object blocks into the partitions comprises dividing the object blocks into d portions in the first and a second direction.

40. (PREVIOUSLY PRESENTED) The method as claimed in claim 35, further comprising:

- reading the modulated recording block from the medium;
- demodulating the modulated recording block; and
- deinterleaving the demodulated recording block.

41. (PREVIOUSLY PRESENTED) The method as claimed in claim 1, wherein a burst error is corrected by the interleaving the data.

42-47 (CANCELLED)